



SEQUENCE LISTING

<110> The Government of the United States of America, as represented by The Secretary of the Department of Health and Human Services

Kashmiri, Syed V.S.
Padlan, Eduardo A.
Jeffery, Schlom

<120> VARIANTS OF HUMANIZED ANTI-CARCINOMA MONOCLONAL ANTIBODY CC49

<130> 4239-61725

<140> US 09/830,748

<141> 2001-04-30

<150> PCT/ US99/25552

<151> 1999-10-29

<150> US 60/106,757

<151> 1998-11-02

<150> US 60/106,534

<151> 1998-10-31

<160> 44.

<170> PatentIn version 3.1

<210> 1

<211> 17

<212> PRT

<213> Mus musculus

<400> 1

Lys Ser Ser Gln Ser Leu Leu Tyr Ser Gly Asn Gln Lys Asn Tyr Leu
1 5 10 15

Ala

<210> 2

<211> 7

<212> PRT

<213> Mus musculus

<400> 2

Trp Ala Ser Ala Arg Glu Ser
1 5

<210> 3

<211> 9

<212> PRT

<213> Mus musculus

<400> 3

Gln Gln Tyr Tyr Ser Tyr Pro Leu Thr
1 5

<210> 4

<211> 5

<212> PRT

<213> Mus musculus

<400> 4

Asp His Ala Ile His
1 5

<210> 5

<211> 17

<212> PRT

<213> Mus musculus

<400> 5

Tyr Phe Ser Pro Gly Asn Asp Asp Phe Lys Tyr Asn Glu Arg Phe Lys
1 5 10 15

Gly

<210> 6

<211> 6

<212> PRT

<213> Mus musculus

<400> 6

Ser Leu Asn Met Ala Tyr
1 5

<210> 7

<211> 17

<212> PRT

<213> Homo sapiens

<400> 7

Lys Ser Ser Gln Ser Val Leu Tyr Ser Ser Asn Ser Lys Asn Tyr Leu
1 5 10 15

Ala

B10
Sub
C6

<210> 8
<211> 7
<212> PRT
<213> Homo sapiens

<400> 8

Trp Ala Ser Thr Arg Glu Ser
1 5

<210> 9
<211> 9
<212> PRT
<213> Homo sapiens

<400> 9

Gln Gln Tyr Tyr Ser Thr Pro Tyr Ser
1 5

<210> 10
<211> 5
<212> PRT
<213> Homo sapiens

<400> 10

Ser Tyr Ala Met His
1 5

<210> 11
<211> 17
<212> PRT
<213> Homo sapiens

<400> 11

Trp Ile Asn Ala Gly Asn Gly Asn Thr Lys Asn Ser Gln Lys Phe Gln
1 5 10 15

Gly

<210> 12
<211> 12
<212> PRT
<213> Homo sapiens

<400> 12

Gly Gly Tyr Tyr Gly Ser Gly Ser Gly Ser Asn Tyr
1 5 10

<210> 13
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Mouse and Human Chimeric Antibody Light Chain Variable Region
<400> 13

Asp Ile Val Met Ser Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1 5 10 15

Glu Arg Val Thr Leu Asn Cys Lys Ser Ser Gln Ser Leu Leu Tyr Ser
20 25 30

Gly Asn Gln Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
35 40 45

Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Ala Arg Glu Ser Gly Val
50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65 70 75 80

Ile Ser Ser Val Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
85 90 95

Tyr Tyr Ser Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu
100 105 110

Lys

<210> 14
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<223> Mouse and Human Chimeric Antibody Heavy Chain Variable Region
<400> 14

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Val Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp His
20 25 30

Ala Ile His Trp Val Lys Gln Asn Pro Gly Gln Arg Leu Glu Trp Ile
35 40 45

Gly Tyr Phe Ser Pro Gly Asn Asp Asp Phe Lys Tyr Asn Glu Arg Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Thr Ser Ala Ser Thr Ala Tyr
65 70 75 80

Val Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Phe Cys
85 90 95

Thr Arg Ser Leu Asn Met Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr
100 105 110

Val Ser Ser
115

<210> 15
<211> 124
<212> DNA
<213> Artificial Sequence

<220>
<223> VH Oligonucleotide Primer

<400> 15
ctaagcttcc accatggagt ggtcctgggt ctctctcttc ctctgctgc tgtgggtgag 60
agtgcactcc caggtccagc tgggtgcagtc cggcgctgag tccctggccg tgtcccaggg 120
cgtg 124

<210> 16
<211> 123
<212> DNA
<213> Artificial Sequence

<220>
<223> VH Oligonucleotide Primer

<400> 16

ggagagaaat atccaatcca ctccaggcgc tgtccaggat tctgtttctt ctgatttccg 60
ctatagagag tgaagggtga gccgcttgcc ttgcaggaaa tcttcacgcc cagggacacg 120
gcc 123

<210> 17
<211> 126
<212> DNA
<213> Artificial Sequence

<220>
<223> VH Oligonucleotide Primer

<400> 17
tggagtggat tggatatttc tctcccgaa acgatgattt taagtacaat gagaggttca 60
agggcaaggc cacactgact gcagacacat ctgccagcac tgcctacgtg gagctctcca 120
gcctga 126

<210> 18
<211> 125
<212> DNA
<213> Artificial Sequence

<220>
<223> VH Oligonucleotide Primer

<400> 18
atgggcccgt agttttggcg ctggagacgg tgaccagggt tccctgtccc cagtaggccca 60
tattcaggga tcttgtgcag aagtacactg cagtatcctc ggaatcagg ctggagagct 120
ccacg 125

<210> 19
<211> 122
<212> DNA
<213> Artificial Sequence

<220>
<223> VL Oligonucleotide Primer

<400> 19
gcaagcttcc accatggata gccaggccca ggtgctcatg ctctgctgc tgtgggtgag 60
cggcacatgc ggcgacatcg tgatgagcca gtctccagac tccctggccg tgtcccaggg 120
cg 122

<210> 20
<211> 121

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> VL Oligonucleotide Primer

 <400> 20
 gggctctgcc ctggtttctg ctgataccag gcgagatagt tcttctgatt tccgctatag 60
 agcagggact ggctggactt gcaattcaga gtcaccctct cgcccagga cagggccagg 120
 g 121

<210> 21
 <211> 121
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> VL Oligonucleotide Primer

 <400> 21
 gcagaaacca gggcagagcc ctaaactgct gatttactgg gcatccgcta gggaatccgg 60
 cgtgcctgat cgcttcagcg gcagcggatc tgggacagac ttcactctga caatcagcag 120
 c 121

<210> 22
 <211> 126
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> VL Oligonucleotide Primer

 <400> 22
 agccgcggcc cgtttcagtt ccagcttggt gccagcgccg aatgtgaggg gatagctata 60
 atactgctga caataataga ctgccacgtc ttctgctgc acgctgctga ttgtcagagt 120
 gaagtc 126

<210> 23
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligonucleotide Primer

 <400> 23
 ctaagcttcc accatggag 19

sub
 Cb
 1

<210> 24
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide primer

<400> 24
atgggcccgt agtttggcg

19

<210> 25
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide primer

<400> 25
gcaagcttcc accatggata

20

<210> 26
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide primer

<400> 26
agccgcggcc cgtttcagtt

20

<210> 27
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Mutagenic primer

<400> 27
gccagcgccg aagctgaggg gatagctata atactgctga ca

42

<210> 28
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Mutagenic primer

<400> 28
ggtgccagcg ccgaagctga ggggggtgct ataatactgc tgaca 45

<210> 29
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Mutagenic primer

<400> 29
gccacggccg aatgtgtagg gatagctata atactgctga ca 42

<210> 30
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Mutagenic primer

<400> 30
gccgaatgtg aggggggtgc tataatactg ctgacaata 39

<210> 31
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Mutagenic primer

<400> 31
gtttcaccga gtgcattgca taatcagtga aggtgta 37

<210> 32
<211> 56
<212> DNA
<213> Artificial Sequence

<220>
<223> Mutagenic primer

<400> 32
gtggccttgc cctggaactt ctgtgagtac ttaaaatcat cgtttccggg agagaa 56

<210> 33
<211> 23
<212> PRT
<213> Homo sapiens

Ab
C61

B16

<400> 33

Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1 5 10 15

Glu Arg Ala Thr Ile Asn Cys
20

<210> 34

<211> 15

<212> PRT

<213> Homo sapiens

<400> 34

Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr
1 5 10 15

<210> 35

<211> 32

<212> PRT

<213> Homo sapiens

<400> 35

Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
1 5 10 15

Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys
20 25 30

<210> 36

<211> 10

<212> PRT

<213> Homo sapiens

<400> 36

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
1 5 10

<210> 37

<211> 30

<212> PRT

<213> Homo sapiens

<400> 37

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr
20 25 30

<210> 38
<211> 14
<212> PRT
<213> Homo sapiens

<400> 38

Trp Val Arg Gln Ala Pro Gly Gln Arg Leu Glu Trp Met Gly
1 5 10

<210> 39
<211> 32
<212> PRT
<213> Homo sapiens

<400> 39

Arg Val Thr Ile Thr Arg Asp Thr Ser Ala Ser Thr Ala Tyr Met Glu
1 5 10 15

Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg
20 25 30

<210> 40
<211> 11
<212> PRT
<213> Homo sapiens

<400> 40

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
1 5 10

<210> 41
<211> 424
<212> DNA
<213> Artificial Sequence

<220>

<223> Mouse and Human Nucleotide Sequences Encoding a Chimeric Antibody
Light Chain Variable Region Together with Flanking Oligomers

<400> 41

gcaagcttcc accatggata gccaggccca ggtgctcatg ctctgctgc tgtgggtgag 60

cggcacatgc ggcgacatcg tgatgagcca gtctccagac tccctggccg tgtcccaggg 120

cgagaggggtg actctgaatt gcaagtccag ccagtccttg ctctatagcg gaaatcagaa 180

gaactatctc gcctggtatc agcagaaacc agggcagagc cctaaactgc tgatttactg 240
 ggcacccgct aggggaatccg gcgtagcctga tcgcttcagc ggcagcggat ctgggacaga 300
 cttcactctg acaatcagca gcgtagcaggc agaagacgtg gcagtctatt attgtcagca 360
 gtattatagc tatccctca cttcgggcgc tggcaccaag ctggaactga aacggggcgc 420
 ggct 424

<210> 42
 <211> 424
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Nucleotide Sequences Complementary to Mouse and Human Nucleotide Sequences Encoding a Chimeric Antibody Light Chain Variable Region Together with Flanking Oligomers

<400> 42
 agccggggcc cgtttcagtt ccagcttggg gccagcggcg aatgtgaggg gatagctata 60
 atactgctga caataataga ctgccacgtc ttctgctgc acgctgctga ttgtcagagt 120
 gaagtctgtc ccagatccgc tgcgctgaa gcgatcaggc acgccggatt ccctagcggg 180
 tgcccagtaa atcagcagtt tagggctctg ccctgggttc tgctgatacc aggcgagata 240
 gttctttctga ttccgctat agagcaggga ctgggtggac ttgcaattca gagtcaccct 300
 ctgcccagg gacacggcca gggagtctgg agactggctc atcagcatgt cgcgcgatgt 360
 gccgctcacc cacagcagca ggagcatgag cacctgggccc tggctatcca tgggtggaagc 420
 ttgc 424

<210> 43
 <211> 434
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Mouse and Human Nucleotide Sequences Encoding a Chimeric Antibody Heavy Chain Variable Region Together with Flanking Oligomers

<400> 43
 ctaagcttcc accatggagt ggtcctgggt cttcctcttc ctctgctgc tgtgggtgag 60
 agtgcactcc caggtccagc tggtagcagtc cggcgtgag tccctggccg tgtcccaggg 120
 cgtgaagatt tctgcaagg caagcggcta caccttcaact ctctatagcg gaaatcagaa 180
 gaaacagaat cctggacagc gcctggagtg gattggatat ttctctcccg gaaacgatga 240

mb
 Cb
 13,0

ttttaagtac aatgagaggt tcaagggcaa ggccacactg actgcagaca catctgccag 300
 cactgcctac gtggagctct ccagcctgag atccgaggat actgcagtgt acttctgcac 360
 aagatccctg aatatggcct actggggaca ggaaccctg gtcaccgtct ccagcgccaa 420
 aactacgggc ccat 434

<210> 44
 <211> 434
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Nucleotide Sequences Complementary to Mouse and Human Nucleotide
 Sequences Encoding a Chimeric Antibody Heavy Chain Variable Region
 Together with Flanking Oligomers

<400> 44
 atgggcccggt agttttggcg ctggagacgg tgaccaggggt tccctgtccc cagtaggcca 60
 tattcagggga tcttgtgcag aagtacactg cagtatcctc ggatctcagg ctggagagct 120
 ccacgtaggc agtgctggca gatgtgtctg cagtcagtgt ggccttgccc ttgaacctct 180
 cattgtactt aaaatcatcg ttccggggag agaaatatcc aatccactcc aggcgctgtc 240
 caggattctg tttcttctga ttccgctat agagagtga ggtgtagccg cttgccttgc 300
 aggaaatott cagccccagg gacacggcca gggactcagc gccggactgc accagctgga 360
 cctgggagtg cactctcacc cacagcagca ggaggaagag gaagaccag gaccactcca 420
 tgggtggaagc ttag 434

Amb
 C6
 M

B10
 Control